

IN THE CLAIMS:

Please amend claims 3, 13, 16, 17, 24, and 26-29 as follows. Please also add claim 30 as follows.

1. (Previously Presented) A method comprising:

receiving, in a second computer node of a computer network, periodic heartbeat messages from a first computer node of the computer network, the second computer node including at least one resource for performing at least one network-specific task;

transmitting heartbeat acknowledgement messages from the second computer node to the first computer node as responses to the heartbeat messages, wherein each heartbeat acknowledgement message indicates to the first computer node that the second computer node is operative within the computer network and wherein the heartbeat acknowledgement messages form a sequence of heartbeat acknowledgement messages transmitted from the second computer node to the first computer node;

examining, in the second computer node, whether state information is to be retrieved for a heartbeat acknowledgement message to be transmitted to the first computer node, the heartbeat acknowledgement message belonging to the sequence of heartbeat acknowledgement messages and the state information being indicative of current ability of the at least one resource to perform the at least one network-specific task;

retrieving the state information for the heartbeat acknowledgement message when the examining indicates that the state information is to be retrieved; and

sending the retrieved state information in the heartbeat acknowledgement messages to the first computer node for storing the state information in the first computer node,

wherein the examining is performed for each heartbeat acknowledgement message to be transmitted to the first computer node, thereby transferring a sequence of the state information within the sequence of heartbeat acknowledgement messages.

2. (Cancelled)

3. (Currently Amended) The method according to claim 21, wherein the examining includes examining whether a predetermined condition is fulfilled.

4. (Previously Presented) The method according to claim 3, wherein the retrieving state information and the sending of the retrieved state information are performed when the examining indicates that the predetermined condition is fulfilled, and the transmitting comprises transmitting a heartbeat acknowledgement message without state information when the examining indicates that the predetermined condition fails to be fulfilled, wherein the heartbeat acknowledgement message is any of the heartbeat acknowledgement messages.

5. (Previously Presented) The method according to claim 1, further comprising determining a type of state information to be retrieved for a heartbeat acknowledgement message.

6-12. (Cancelled)

13. (Currently Amended) ~~A computer node~~An apparatus comprising:

at least one resource ~~for performing~~configured to perform at least one network-specific task;

a receiving unit configured to receive periodic heartbeat messages from another computer node; and

a transmitting unit configured to transmit heartbeat acknowledgement messages to the other computer node as responses to the periodic heartbeat messages, wherein each heartbeat acknowledgement message indicates to the other node that the computer node is operative within the computer network and wherein the heartbeat acknowledgement messages form a sequence of heartbeat acknowledgement messages,

wherein the transmitting unit comprises an examining unit configured to examine whether state information is to be retrieved for a heartbeat acknowledgement message to be transmitted to the other computer node, the heartbeat acknowledgement message belonging to the sequence of heartbeat acknowledgement messages and the state information being indicative of current ability of the at least one resource to perform the at least one network-specific task;

the transmitting unit further comprises a retrieving unit configured to retrieve, upon indication by the examining unit, state information for the heartbeat acknowledgement message and a sending unit, responsive to the retrieving unit, configured to send the retrieved state information in the heartbeat acknowledgement message to said other computer node,

wherein the examining unit is configured to operate for each heartbeat

acknowledgement message to be transmitted to said other computer node, thereby transferring a sequence of the state information within the sequence of heartbeat acknowledgement messages to the other computer node.

14. (Cancelled)

15. (Previously Presented) A method comprising:

transmitting periodic heartbeat messages from a first computer node of a computer network to a second computer node of the computer network, the second computer node including at least one resource for performing at least one network-specific task;

receiving, in the first computer node, heartbeat acknowledgement messages from the second computer node as responses to the heartbeat messages, wherein the heartbeat acknowledgement messages form a sequence of heartbeat acknowledgement messages and wherein each heartbeat acknowledgement message of the sequence indicates to the first computer node that the second computer node is operative within the computer network;

examining, in the first computer node, whether a heartbeat acknowledgement message comprises state information indicative of current ability of said at least one resource to perform said at least one network-specific task, wherein the heartbeat acknowledgement message is any of the heartbeat acknowledgement messages of the sequence; and

storing the state information for managing the computer network.

16. (Currently Amended) The method according to claim 15, further comprising storing the state information in a ~~Management~~management ~~Information~~information ~~Base~~base.

17. (Currently Amended) The method according to claim 16, further comprising transferring data from the ~~Management~~management ~~Information~~information ~~Base~~base to an entity external to the computer network.

18. (Previously Presented) The method according to claim 15, wherein receiving the heartbeat acknowledgement message further comprises removing the second computer node from the network when no heartbeat acknowledgement message is received within a predetermined period of time.

19-23. (Cancelled)

24. (Currently Amended) ~~An apparatus~~ A computer node comprising:

a transmitting unit configured to transmit periodic heartbeat messages to a second computer node of a computer network, the second computer node including at least one resource ~~for performing~~configured to perform at least one network-specific task;

a receiving unit configured to receive heartbeat acknowledgement messages from the second computer node as responses to the heartbeat messages, wherein the heartbeat acknowledgement messages form a sequence of heartbeat acknowledgement messages and

wherein each heartbeat acknowledgement message of the sequence indicates that the second computer node is operative within the computer network;

an examining unit configured to examine whether a heartbeat acknowledgement message comprises state information indicative of current ability of the at least one resource to perform said at least one network-specific task, wherein the heartbeat acknowledgement message is any of the heartbeat acknowledgement messages of the sequence; and

a storing unit configured to store the state information for managing the computer network.

25. (Cancelled)

26. (Currently Amended) An apparatus ~~A computer node~~ comprising:

at least one resource means for performing at least one network-specific task;

receiving means for receiving periodic heartbeat messages from another computer node; and

transmission means for transmitting heartbeat acknowledgement messages to the other computer node as responses to the periodic heartbeat messages, wherein each heartbeat acknowledgement message indicates to the other computer node that the computer node is operative within a computer network and wherein the heartbeat acknowledgement messages form a sequence of heartbeat acknowledgement messages,

wherein the transmission means comprises examining means for examining whether state information is to be retrieved for a heartbeat acknowledgement message to be

transmitted to the other computer node, wherein the heartbeat acknowledgement message belongs to the sequence of heartbeat acknowledgement messages and wherein the state information is indicative of current ability of the at least one resource to perform the at least one network-specific task,

wherein the transmission means also comprises retrieving means for retrieving, upon indicating by the examining means, the state information for the heartbeat acknowledgement message and sending means, responsive to the retrieving means, for sending the retrieved state information in the heartbeat acknowledgement message to said other computer node,

wherein the examining means are configured to operate for each heartbeat acknowledgement message to be transmitted to the other computer node, thereby transferring a sequence of the state information within the sequence of heartbeat acknowledgment messages.

27. (Currently Amended) An apparatus ~~A computer node~~ comprising:

transmitting means for transmitting periodic heartbeat messages to at least one second computer node of a computer network, the second computer node including at least one resource for performing at least one network-specific task;

reception means for receiving heartbeat acknowledgement messages from the at least one second computer node as responses to the heartbeat messages, wherein the heartbeat acknowledgement messages form a sequence of heartbeat acknowledgement messages and wherein each heartbeat acknowledgement message indicates that the second

computer node is operative within the computer network;

examining means for examining whether a heartbeat acknowledgement message comprises state information indicative of current ability of the at least one resource to perform said at least one network-specific task, wherein the heartbeat acknowledgement message is any of the heartbeat acknowledgement messages of the sequence; and

storing means for storing the state information for managing the computer network.

28. (Currently Amended) The ~~computer node~~apparatus according to claim 24, wherein the computer node is operably connected to a ~~Management~~management ~~Information~~information ~~Base~~base for storing the state information sent to the first computer node.

29. (Currently Amended) The ~~computer node~~apparatus according to claim 24, further comprising a network interface ~~for communicating~~configured to communicate with an access unit configured to access the ~~Management~~management ~~Information~~information ~~Base~~base.

30. (New) The apparatus according to claim 13, wherein retrieval of the state information and the sending of the retrieved state information are performed when the examining unit indicates that the predetermined condition is fulfilled, and

wherein the transmission of each heartbeat acknowledgement message comprises a transmission of a heartbeat acknowledgement message without state information when

the examining indicates that the predetermined condition fails to be fulfilled, wherein the heartbeat acknowledgement message is any of the heartbeat acknowledgement messages.